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1. Use of perfluoropolyether phosphates as stabilizing agents for polyphenols in cosmetic and/or dermatological compositions for topical application.

**CLAIMS** 

2. Use according to claim 1, wherein said perfluoropolyether phosphates 5 have the general formula (I):

 $R_{f}$ -[CF<sub>2</sub>CH<sub>2</sub>-O-(CHR<sub>1</sub>-CHR<sub>2</sub>O)<sub>n</sub>-P(O)(OH)<sub>2</sub>]<sub>x</sub> **(I)** 

wherein

x = 1 or 2;

R<sub>1</sub> and R<sub>2</sub> are independently selected between H and CH<sub>3</sub>; 10

n is an integer between 1 and 50, preferably 1-6;

R<sub>f</sub> is a perfluoropolyether chain with a number average molecular weight between 400 and 1800, preferably 500-1300, comprising repeating units selected from the following:

- a)  $-(C_3F_6O)$ 
  - b)  $-(CF_2CF_2O)$ -
  - c)  $-(CFL_0O)$ -, wherein  $L_0 = -F$ ,  $-CF_3$ ;
  - d)  $-CF_2(CF_2)_yCF_2O_y$ , wherein y = 1 or 2;
  - e) -CH<sub>2</sub>CF<sub>2</sub>CF<sub>2</sub>O-,
- and wherein, when x = 1, an end group is a perfluoroalkyl selected from 20 CF<sub>3</sub>O, C<sub>2</sub>F<sub>5</sub>O, C<sub>3</sub>F<sub>7</sub>O.
  - 3. Use according to claim 2, wherein R<sub>f</sub> has one of the following structures:
  - 1)  $-(CF_2O)_a-(CF_2CF_2O)_b-$
- wherein b/a lies between 0.3 and 10 and a is an integer different from 0; 25
  - 2)  $-(CF_2-(CF_2)_y-CF_2O)_{b'}-$

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wherein y = 1 or 2;

- 3)  $-(C_3F_6O)_{r^-}(C_2F_4O)_{b^-}(CFL_0O)_{t^-}$ , wherein r/b = 0.5-2.0, (r+b)/t = 10-30, b and t are integers different from 0;
- 5 4)  $-(OC_3F_6)_r-(CFL_0O)_t-OCF_2-R'_f-CF_2O-(C_3F_6O)_r-(CFL_0O)_t-$ 
  - 5) -(CF<sub>2</sub>CF<sub>2</sub>CH<sub>2</sub>O)<sub>q'</sub>-R'<sub>f</sub>-O-(CH<sub>2</sub>CF<sub>2</sub>CF<sub>2</sub>O)<sub>q'</sub>-wherein R'<sub>f</sub> is a fluoroalkylene group with 1-4 carbon atoms; L<sub>0</sub> is chosen between F and CF<sub>3</sub>;
  - 6)  $-(C_3F_6O)_r-OCF_2-R'_f-CF_2O-(C_3F_6O)_r-$
- 10 wherein in the above formulas:

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- -(C<sub>3</sub>F<sub>6</sub>O)- represents units of formula:
- -(CF(CF<sub>3</sub>)CF<sub>2</sub>O)- and/or -(CF<sub>2</sub>-CF(CF<sub>3</sub>)O)-
- a, b, b', q', r, t are integers, whose sum is such that  $R_f$  has values of number average molecular weight  $M_n$  lying between about 400 and about 1800, preferably between 500 and 1300.
  - 4. Use according to claim 3, wherein the perfluoropolyether phosphates are perfluoropolyether diphosphates of formula (II):

$$-CF_2-O(CF_2CF_2O)_b(CF_2O)_a-CF_2-[CH_2-(OCH_2CH_2)_nO-PO(OH)_2]_2$$
 (II)

- wherein n = 1 or 2, b/a = 0.5-3.0 and a, b and r have the meanings reported in claim 3.
  - 5. A cosmetic and/or dermatological composition for topical use comprising, as active substances, polyphenols in association with a suitable carrier, characterized by containing, as stabilizing agent, an effective amount of at least one perfluoropolyether phosphate.
- 6. A cosmetic and/or dermatological composition according to claim 5, wherein said stabilizing agent is a perfluoropolyether diphosphate according to formula (II) of claim 4.
  - 7. A composition according to claim 6, wherein said at least one perfluoropolyether diphosphate is contained in an amount included between 0.1 and 5.0% by weight of total composition weight.
  - 8. A composition according to claim 7, wherein said at least one perfluoropolyether diphosphate is contained in an amount included

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between 0.2 and 1.0% by weight of total composition weight.

- 9. A composition according to any one of claims 5 to 8, wherein the polyphenol content is included between 0.1% and 5% by weight of total composition weight.
- 5 10. A composition according to any one of claims 5 to 9, further including vitamin E.
  - 11. A composition according to claim 10, wherein said vitamin E is contained in an amount between 0.5 and 10% by weight of total composition weight.
- 10 12. A composition according to any one of claims 5 to 11, further including ascorbic acid.
  - 13. A composition according to claim 12, wherein the ascorbic acid is contained in an amount between 0.1 and 10% by weight of total composition weight.
- 15 14. A composition according to any one of claims 5 to 13, further including at least one compound selected from the group consisting of vitamin A, carotenes, carotenoids, lutein, lycopene and xanthophylls.
  - 15. A composition according to any one of claims 5 to 14, characterized by being in the form of a cream.